

# NASA TECH BRIEF

*Lyndon B. Johnson Space Center*



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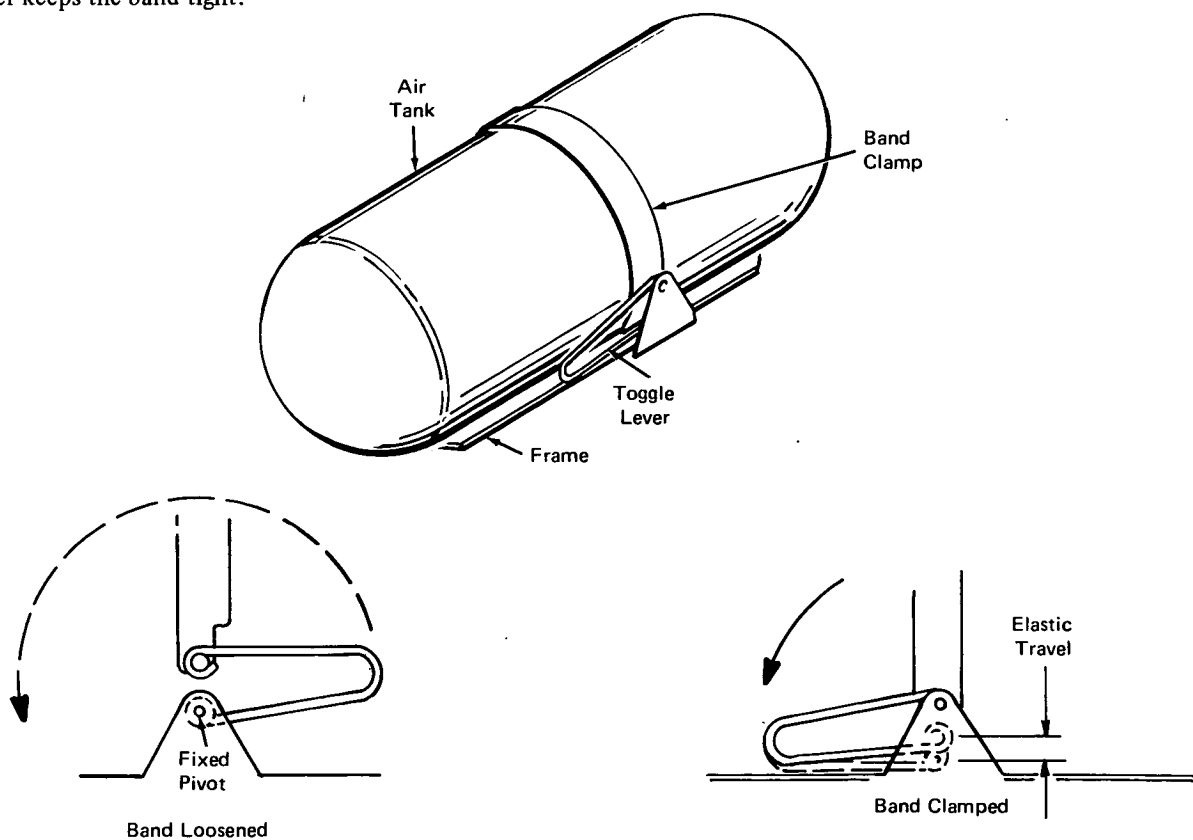
## A Band Clamp With a Spring Toggle Lever

A band clamp has been designed with a toggle lever that allows it to be fastened and unfastened quickly and easily. This clamp has an additional fixture that makes it useful where stresses cause a change in the size of the clamped part. The toggle lever is also a spring that holds the clamped part with the same force, even though the part may expand or contract.

The device as shown is used to attach an air tank to a carrying frame. In this application, tanks of somewhat different diameters can be accommodated without band adjustment. The spring force of the toggle lever keeps the band tight.

The lever is a U-shaped elastic bar that pivots at each end. The toggle lever is designed so that in the clamped position the elastic bar is slightly compressed. In this way there is a constant tightening force on the clamp.

The clamp could have several other applications, as it provides tolerances for both expansion and contraction. It might be useful with firemen's breathing apparatus and luggage racks and other freight-carrying equipment. Also, using the same piece as a handle and a spring reduces production costs by reducing the number of parts.



Frame For Air Tanks

(continued overleaf)

**Note:**

No further documentation is available. However,  
technical questions may be directed to:

Technology Utilization Officer  
Johnson Space Center  
Code AT3  
Houston, Texas 77058  
Reference: B74-10240

**Patent status:**

NASA has decided not to apply for a patent.

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